Psychological capital and entrepreneurial intentions of adolescents. Does entrepreneurship education and training make a difference?

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ABSTRACT

This study challenges the Psychological Capital (PsyCap) and entrepreneurship literatures to explore individual differences during compulsory schooling in terms psychological capacities and entrepreneurial intentions (EI). It focuses on adolescents during compulsory schooling to address the broad question: Does entrepreneurial education and training (EET) make a difference? More specifically, it investigates whether ETT school activities account for individual differences in terms of PsyCap and EI. Based on a sample of 647 boys and girls, this study provides unique empirical evidence on the beneficial role of EET regarding hope, efficacy and optimism of adolescents as well as their EI.

Keywords: adolescents; psychological capital; entrepreneurial intentions; compulsory schooling.

Introduction

Europe seems to be lagging behind other regions, such as China and USA, regarding therole of entrepreneurship in society (Roman and Maxim, 2017). Less than half of EU citizens would prefer to be self-employed rather than working for others, whereas an even smaller percentage perceives EE as important. Promoting an entrepreneurial culture among European citizens as well as challenging entrepreneurship have recently become high-priority topics, as evidenced in various European Commission's formal reports (Miranda et al., 2017).

EE has played an important role in promoting EI and furthering the development of enterprising citizens (Paço et al., 2013). As a young discipline with a presence of no more than20 years it is still ill-defined (Duval-Couetil, 2013). However, more and more initiatives are emerging in primary and secondary schools (Fayolle, 2013b). Still, the work on how education about entrepreneurship differentiates the aspirations of adolescents to work for themselves as well as their psychological capacities is limited. Little attention has been paid to EET activities that target students in secondary schools (Elert et al., 2015). Responding to recent claims that the entrepreneurial mindset evolves at an early age (Obschonka, 2016), this study provides unique empirical evidence on the beneficial role of EET regarding academic PsyCap and EI of compulsory secondary school adolescents.

This paper deals with the first empirical study in a European country, namely Greece, to provide evidence on individual differences in terms of PsyCap and EI exhibited by adolescents. The widely accepted constructs of PsyCap and EI are tested in relation to younger individuals within educational settings. Adolescents, namely high school students, are expected to be educated to perform entrepreneurially and develop their PsyCap resources.

This paper is structured in four parts. Following this introductory section, the literature review is discussed to justify our basic research question. In the third and fourth sections, this paper outlines the research methodology and the subsequent empirical findings. The fourth section concludes.

Literature Review

Interest in entrepreneurship teaching began in the early 1970s. Since then, its scope has also broadened, from primarily a business school topic to all fields of university education (Kuratko, 2005). Although entrepreneurship education and training (EET) is at the crossroads of entrepreneurship and education, it is largely disconnected from the field of education (Fayolle, 2013a). However, to support the 'old' question: is entrepreneurship teachable? (Haase and Lautenschläger, 2011), this study favours the behavioural approach (entrepreneurs can be taught and educated) and not the trait approach (entrepreneurs have a unique personality; a fixed state of existence; traits can neither be learned nor developed through education, training or professional experience). Moreover, it focuses on adolescence, an important life span to provide empirical evidence on the following challenging question: Does EET make a difference in the PsyCap and EI of adolescents?

This question dealing exclusively with upper secondary education is noteworthy for at least three reasons. First, education is a key variable for reaching individually and socially desired outcomes (Spinath et al., 2014), especially for adolescents, who experience rapid and tumultuous changes in biological, social and psychological aspects, as well as shifting self-concepts (Byrne et al., 2007). Second, individuals who develop an entrepreneurial career interest as early as in adolescence more often engage in entrepreneurship during their subsequent career than others (Falck et al., 2012). Third, PsyCap especially in academic settings, the so-called academic PsyCap (Luthans et al., 2019), is a key construct for understanding "who adolescents are" and, of most importance for developmental ramifications "what they can become" (Luthanset al., 2004).

As far as EI are concerned, the evidence supporting the link between education and student intention to become self-employed and/or a business owner is conflicting. Some scholars find a positive link between entrepreneurship education (EE) and intention (DeTienne and Chandler, 2007; Ertuna and Gurel, 2011; Rauch and Hulsink, 2015). Their argument is that students with entrepreneurial knowhow are expected to increase new ventures and improve the growth rates of emerging firms. Other scholars detect a negative link (Oosterbeek et al., 2010; Souitaris et al., 2007; Von Graevenitz et al., 2010) claiming that higher education reduces the likelihood of entrepreneurship (Nabi et al., 2010), because it might generate better options (Van der Sluis et al., 2005). Given the results of studies claiming that academic major plays a significant role asfar as EI are concerned (for example, Zhang et al., 2014), we explore whether EET schoolactivities will show differences in EI of young adults.

As far as PsyCap is concerned, since the seminal work of Luthans (2002), little attentionhas been devoted to show its impact on important student-related issues (the so-called academic PsyCap). In addition, there is limited work on adolescents' psychological issues (i.e., emotional dispositions), despite the challenge of educational institutions at all levels to promote the attitudes and skills associated with

entrepreneurship (Vega et al., 2016). This concept is illuminating as it goes beyond “what you have” (i.e., traditional economic capital), “what you know” (i.e., human capital) and “who you know” (social capital), and deals with “who you are” and “what you can become” (Luthans et al., 2004). Considerable meta-analytic data (e.g., Avey et al., 2011; Newman et al., 2014) has been gathered on the four dimensions (hope, efficacy, resilience and optimism) of the PsyCap, known by the acronym HERO. What this data shows is that individuals high in PsyCap perform better than those low in PsyCap. More specifically, individuals with higher levels of PsyCap are generally more hopeful in terms of their goals and their ability to achieve them, are realistically optimistic about attaining positive outcomes, possess beliefs about their efficacy in pursuing new objectives, and are resilient in the face of obstacles – collectively resulting in more desirable attitudes, behaviours, and performance in a variety of contexts (Luthans et al., 2016).

Responding to concerns that adolescence is a crucial stage in one’s life, where identity anda sense of self are under construction (Harter, 1988), this study explores whether EET school activities will show differences in the PsyCap of adolescents.

Research Methodology

Based on formal data (National Data, 2019), the total number of Greek upper secondary schools (3-year Lyceum School; US equivalent is 3-year high school) is 1,345, of which 28% are located in Attica, the greater area around the capital of Greece. This area is highly heterogeneous in terms of socio-economic status, religion, education, consumption patterns, etc. Table 1 outlines the sample demographics.

The main sample of this research study includes adolescents attending the second and third grade (the US equivalent being eleventh and twelfth grade high school) in 18 Lyceum school units of three types: public, private and experimental.

Adolescents are classified in two groups, one where schools perform low EET activities (561 students) and one where schools perform high EET activities (86 students). The classification was based on one question (response format: 1 ‘not at all’ to 7 ‘very much’): Does your school perform EET activities (i.e., classroom lessons on entrepreneurship, external visits, working in groups for business ideas)?

Table 1. Sample demographics of adolescents

	All
No. of persons	647
Male	317
Female	330
School location	
Athens	70%
outside Athens (in Attica)	30%
School level	
2nd grade lyceum	49%
3rd grade lyceum	51%
School type	
public	77%
private	6%
experimental (1st class public: access through exams)	18%
Father’s educational level	
low level (compulsory schooling)	49%
high level	51%
Mother’s educational level	
low level (compulsory schooling)	43%
high level	57%
One parent is an entrepreneur	28%
Family monthly income (%)	
low	10%
medium	79%
high	11%

The process of anonymous data collection was a time-consuming one, especially as the respondents were underage. Before we could begin, we had to obtain approval from public authorities, such as the Minister of Education and Religious. It is important to note that prospective students were sent home with an introductory letter for their parents about the survey. In total, the whole process of preparing, submitting, and receiving the final documents, signed, and stamped, took two months. Out of the 748 structured questionnaires distributed, 647 were completed and returned (86% response rate).

Results

This study uses STATA 13.0 software to conduct its statistical analysis. First, factor analysis was used to verify the validity of all measures. The averages of items pertaining to factors extracted were used to form the variables for further statistical analysis. Table 2 depicts the descriptive statistics together with the inter-item reliability coefficients of all the variables, which are acceptable according to the organizational attribute reliability standards suggested by Van de Ven and Ferry (1980).

Table 2. Descriptive statistics and reliability coefficients

Variable	Mean[1]	SD	Min	Max	alpha
PsyCap					
Hope	5.38	0.92	1	7	0.68
Efficacy	5.28	1.03	1	7	0.67
Resilience	5.31	0.96	1	7	0.76
Optimism	4.95	1.23	1	7	0.89
Entrepreneurial intentions	3.87	1.78	1	7	0.95

To test our basic research question one-way analysis of variance (ANOVA) was performed using the two groups of adolescents as independent variables and academic PsyCap and EI as dependent variables. Inspection of Table 3 reveals significant differences between adolescents regarding three dimensions of PsyCap, namely confidence, hope and optimism, as well as EI.

Table 3. Differences between adolescents

	Low EETschool activities [a]	High EETschool activities [a]	*F*	p-value [b]
PsyCap:				
Hope	5.35	5.55	3.48	0.06
Efficacy	5.25	5.48	3.62	0.06
Resilience	5.41	5.30	1.07	ns
Optimism	4.90	5.32	8.78	0.00
EI	3.79	4.41	9.29	0.00

Notes: [a] Figures represent mean values in each cluster,
[b] Significance level (p- value) is based on one-way analysis of variance, ns=non-significant

The empirical evidence reported here advances the understanding of whether EET school activities make a difference in the academic PsyCap and EI of adolescents. Learning aboutentrepreneurship during adolescence is worth the trouble. It empowers adolescents to have more confidence, hope and optimism while boosting their intentions towards entrepreneurship. In addition, the empirical findings underscore the differences between the individual components of PsyCap when EET is concerned. As the work of PsyCap on educational outcomes is far from complete (Luthans and Youssef-Morgan, 2017), theory refinements should also consider age particularities, such as the ones reflected on our respondents attending upper secondary level schooling.

Discussion

This study provides unique empirical evidence on the beneficial role EET plays for school adolescents. Despite recent claims that the entrepreneurial mindset evolves at an early age (Obschonka, 2016), there is still limited work on how EE differentiates the aspirations of adolescents to work for themselves as well as their psychological capacities. Much less attention has been paid to EET programs that target students in secondary schools (Elert et al., 2015). Although EE is largely disconnected from the field of education (Fayolle, 2013b), EE curricula deserve additional attention. Contrary to the review study of Rideout and Gray (2013) that we still do not know whether EE really works, we trust that it is valuable for all youths, especially to motivate them stay engaged in entrepreneurial activities. EE is valuable even when students realize they do not want a career in entrepreneurship (Westhead and Solesvik, 2016). The empirical evidence provided here shows that EET activities during upper secondary schooling do differentiate adolescents. Consequently, instructors (teachers and trainers), especially in Greece, a country where EE is far behind other European countries, should treat them carefully when they are looking for ways to communicate their enthusiasm for entrepreneurship (Sánchez, 2011) and change ‘hearts and minds’

(Souitaris et al., 2007).

Our empirical study supports the aspirations of policy makers in Europe to enhance entrepreneurship at all educational levels, especially throughout compulsory schooling (Vega et al., 2016). Career outcomes (e.g., occupational choice) are apparently rooted in adolescence while the development of entrepreneurial mindset starts even earlier (Obschonka, 2016). Preparing the next generation of job creators early enough will secure economic growth. Educational systems, at least in Greece, would benefit from focusing on individuals' intrinsic capacities at an early age, especially in the context of compulsory education, where adolescents are primarily situated.

The main limitation of to this empirical research involves common method bias (CMB) concerns about the measure of PsyCap. Nevertheless, self-referent measures are preferred as indicators in constructs targeting individual perceptions (Luthans et al., 2016). In addition, the relatively large sample size of the present study can also mitigate the influences of potentialrandom errors related to self-reporting (Rothman, 2002).

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